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**Technology Center 2100**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/624352  
Filing Date: January 26, 2004  
Appellant(s): ESPESETH ET AL.

Derek P. Martin #36595  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 7/4/06 appealing from the Office action mailed 2/6/06.

**(1) Real Party in interest**

A statement identifying by name the real party interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is incorrect.

A correct statement of the status of the claims is as follows:

Claims 1-6,10,15-20,24,29-36,38,39,42,45,46 have been canceled.

Examiner withdraws the rejections of claims 37,40-41,43-44,47-48 under U.S.C. 101.

Claims 7-9,11-14,21-23,25-28,37,40-41,43-44 and 47-48 have been rejected under U.S.C. 102(b) as being anticipated by Zalewski et al (US 2002/0052914).

**(4) Status of Amendments After Final**

No amendment after final has been filed.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is incorrect.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct. However, Examiner has withdrawn the rejection based on 35 U.S.C. 101, in response to the appeal brief.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 7-9,11-14,21-23,25-28,37,40-41,43-44,47-48 are rejected under 35 U.S.C. 102 (b) as being anticipated by Zalewski (US Pub 2002/0052914).

As for claim 7, the claim recites, an apparatus comprising: at least one processor (Fig 1: #108); a memory coupled to the at least one processor (Fig 1: #120), a plurality of logical partitions defined on the apparatus (Fig 2: #202, #204 partitions 1,2; page 4 paragraphs 42,43); a persistent resource database residing in the memory (Zalewski describes the associations of resources to partitions being stored in non-volatile RAM, and the data being booted into memory during subsequence reboots as follows, page 5 paragraphs 53-55 describes using HWRPB during booting of an instant OS; page 13 paragraphs 197,247,248 describe data base APMP including HWRPB information), the resource database including a list of resources owned by each of the plurality of logical partitions, where the resources were detected in previous power on cycles of the apparatus (paragraph 54, HWRPB information is used during subsequent boots); and a resource detection mechanism residing in the memory and executed by the at least one processor,

the resource detection mechanism determining from the resource database a set of required resources owned by a selected logical partition (paragraphs 55, console program communicates with OS using information in the HWRPB), detecting each resource as the resource is initialized, detecting when at least one required resource for the selected logical partition is not powered up, initiating power up of the at least one required resource that is not powered up, and starting the selected logical partition when all required resources owned by the selected logical partition have been detected (paragraph 54 describes using the list of resources saved previously to allow for an automatic configuration during subsequent reboot; Zalewski describes that during the reboot, the resources are validated and if enough "required" resource, for example certain amount of memory, certain CPU resources being assigned to a partition; paragraph 53 lines 20-26, the OS of this partition is allowed to run; paragraph 54. Zalewski further describes the resources are monitored to determine when they are powered up; and the resource's statuses are recorded as available for the particular partition in the HRPB structure; paragraph 57).

As for claim 8, Zalewski describes wherein the selected resource is a hardware resource (sharing CPUs, memory, i/o hardware; Zalewski's paragraphs 10-14).

As for claim 9, Zalewski describes wherein the selected resource is a software resource (sharing data based resource such as HWRPB configuration information; Zalewski's page 4, paragraphs 43,44; page 5 paragraph 56).

As for claim 11, the claim recites wherein the resource detection mechanism initiates power off of a plurality of resources owned by the selected logical partition in response to the selected logical partition being powered off; The claim rejected based on the same rationale as in the rejection of claim 7. Zalewski describes the CPUs that logically assigned to each partition,

can be turned “on and “off” dynamically (Zalewski’s column 2, paragraph 11). Zalewski further describes the console program that provides a mechanism to remove a resource such as a CPU from available CPUs within a partition, in response to a shutdown for the instant operating system running in that partition; Zalewski’s paragraph 56).

As for claim 12, it is rejected based on the same rationale as in the rejection of claims 7,10,11. Zalewski further describes the “list of resources owned by each of logical partitions” in the form of configuration tree structure (Zalewski’s page 4, paragraphs 54,54).

Claims 13,22,27,40,47 rejected based on the same rationale as in the rejection of claim 8.

Claims 14,23,28,,41,48 rejected based on the same rationale as in the rejection of claim 9.

As for claim 21, the claim rejected based on the same rationale as in the rejection of claims 12,4-6.

Claims 25,43 rejected based on the same rationale as in the rejection of claim 11.

As for claim 26, the claim rejected based on the same rationale as in the rejection of claims 12,4-6,10-11.

Claim 42 rejected based on the same rationale as in the rejection of claim 10.

### ***Response to Arguments***

Applicant's arguments in the Appeal brief have been fully considered but they are not persuasive. Examiner respectfully traverses Applicant's arguments for the following reasons:

Issue 1: Whether claims 37,40 37,40-41,43,44,47-48 are unpatentable under 35 U.S.C. 101.

Examiner withdraws the rejections of claims 37,40 37,40-41,43,44,47-48 under 35 U.S.C. 101.

Issue 2: Whether claims 7-9,11-14,21-23,25-28,37,40-41,43-44,47-48 are anticipated under 35 U.S.C 102(0b) by Zalewski et al.

A) Examiner thanks Applicant for pointing out minor grammar and typographic errors in the previous office action; for example, the word “statutes” was typed instead of typing the word “statuses”. Examiner regrets for any inconvenience causing by these minor errors. The statuses of the resources, such as CPU being plugged into a slot and to be powered up for usage is detected and recorded in a data structure having a Physical Present bit (PP bit), PP bit when set, it indicates that the CPU resource is powered up. Conversely, when the bit is not set, it indicates that the CPU resource is powered down. The PA bit indicates that the resource is belonged to a partition (see Zalewski’s paragraph 57). By monitoring these bits (these statuses bits), one can easily “detecting when at least one required resource for the selected logical partition is not powered up” as claimed.

B) Applicant argues that Zalewski does not teach or suggest the limitation “initiating power up of the at least one required resource that is not powered up”. Examiner notes that this limitation does not appear to have support in the disclosure. In fact, the word “initiating” cannot be found anywhere in the specification. Examiner cannot find what are essential steps, specifically being done by the resource detection mechanism, so that it can initiate power up of the at least one required resource that is not powered up.

Specification’s page 7 lines 15-19 states:

This autonomic detection of resources by resource detection mechanism 122 allows the partition manager 121 to automatically start a logical partition when resources become available. Thus, if a computer system is powered up without one **if its I/O enclosures being powered for service of the I/O enclosure**, the partition manager 121 will detect when the I/O enclosure is powered up and will automatically start all logical partitions that had all of their required resources detected except for those in the I/O enclosure.

Firstly, the Applicant's poor grammar and choice of words makes it difficult to decipher the language above. The first phrase "if computer system is powered up without one" is unclear. It's not clear what "one" is. In other words, "one" lacks antecedence basis. Assuming "one" is one of required resources, then the meaning of the following part of the specification, page 7 lines 16-19 becomes unclear. The phrase "if its I/O enclosures ...when the I/O enclosure is powered up and will automatically start all logical partitions that had all of their required resources detected except for those in the I/O enclosure". It can be understood as follows: one resource somehow resides in different multiple I/O enclosures (i.e its I/O enclosures). The partition manager somehow will detect the "I/O enclosure" being powered up and automatic start all logical partition. It is unclear on the relationship of "the I/O enclosure" and "the I/O enclosures". In other words, "the I/O enclosure" lacks antecedent basis. Similarly rationale applies to "except for those in the I/O enclosure".

Assuming Applicant made a typographic error and the specification really means "...Thus, if a computer system is powered up without **one of its I/O enclosures** being powered for service of the I/O enclosure, the partition manager 121 will detect when the I/O enclosure is powered up and will automatically start all logical partitions that had all of their required resources detected



except for those in the I/O enclosure..”. The meaning of “one” is more apparent, that is “one of its I/O enclosures”. However, the specification still does not require the resource detection mechanism “ detecting when..required resourced ..is not powered up, initiating power up ..required resource that is not powered up” as claimed. Rather, the specification states when the resource is powered up (for example by means in the I/O enclosure for the resource), the resource detection mechanism merely recognizing the resource is available and assigning the resource to the particular logical partition.

In a similar manner, Zalewski’s paragraph 57 discloses when a resource CPU is plugged into a slot (being powered up), the console program detects and setting the CPU present bit. Naturally, the program starts adjusts various data structures and assigning the resource to the logical partition (see Zalewski’s paragraphs 165,167).

C) Zalewski’s paragraph 54 further discloses the program not only detect the resource just being plugged in and powered up, it also keep track the requirement of all associated resources (keep track the partition’s resources that were detected in previous power on cycles, saving this configuration information in non-volatile RAM, and using for subsequent boot, power on) in a partition, then only start the partition only if the partition has sufficient required resources (corresponding to the claim’s all required resources). Zalewski’s paragraph 74 further discloses a tree data structures so that the program can check statuses of all resources of a partition before initializing and running the operating system in that partition. Zalewsk’s paragraph 180 further suggest, these partition instants are communicated when a new resource is plugged in, and thus keep track this resource statuses in their tree data structures.

D) In response to Applicant's argument on pages 9-14, Applicant shows an example of the Present bits and the Available bits, and the changing of the Available bits when a CPU is reconfigured from one partition to another partition. The reconfiguration of course can be done without the CPU being powered down (see Zalewski's paragraph 57). In other words, in this situation the Availability bits can be changed while the Present bits stay the same. Applicant then leaps to the conclusion that Zalewski does not teach, "detecting when at least one required resource for the selected logical partition is not powered up". In contrast, Zalewski clearly indicates the CPU resource can be plugged in and powered up, the physical present of this CPU is thus detected by the setting of the Present bit (see rationale in items A,B).

E) In response to Applicant's argument on page 14 for claims 21,37 and their dependent claims,

the Appeal Brief page 14 line 7 indicates "the claims 21 and 37 contain limitations similar to those in claim 1; which are addressed in detail about..". Examiner notes that the claim 1 has been cancelled, and therefore claims 1 is not being addressed in detail above as Applicant asserting;

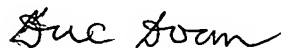
The Appeal Brief page 14 lines 8-11 have the same defect as discussed in above paragraph.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,



Duc Doan

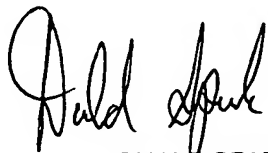
Examiner

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